

IN THE CLAIMS

Please amend the claims as follows.

1. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, high pressure water is jetted obliquely rearward from a plurality of injection holes opened in the nozzle, a propulsion force is generated in the nozzle by that jetting force, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the high pressure water jetted from the nozzle, characterized in that:

the nozzle is made to turn in a spiral manner in conjunction with turning and pulling out of the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe.

2. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, high pressure water is jetted obliquely rearward from a plurality of injection holes opened in the nozzle, a propulsion force is generated in the nozzle by that jetting force, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the high pressure water jetted from the nozzle, characterized in that:

the nozzle is made to turn in a spiral manner in conjunction with turning and pulling out of the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is set so as to be larger than diameters of other injection holes; and

angle α subtended by center axis line I of the certain injection hole and center axis line H of the nozzle is set so as to be smaller than angle θ_3 subtended by center axis line J of other injection holes and the center axis line H of the nozzle (so that $\alpha < \theta_3$).

3. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, high pressure water is jetted from a plurality of injection holes opened in the nozzle, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the high pressure water jetted from the nozzle, characterized in that:

the nozzle is made to turn in a spiral manner in conjunction with turning, pulling out, and pulling back of the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is set so as to be larger than diameters of other injection holes; and

angle α subtended by center axis line I of the certain injection hole and center axis line H of the nozzle, and angle θ_3 subtended by center axis line J of other injection holes and the center axis line H of the nozzle, respectively, are set to 90 degrees.

4. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, high pressure water is jetted from a plurality of injection holes opened in the nozzle, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe

is washed by the high pressure water jetted from the nozzle, characterized in that:

the nozzle is made to turn in a spiral manner along inner peripheral surface of the pipe, in conjunction with turning and feeding out the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is made larger than diameters of other injection holes;

position of the certain injection hole is made farther rearward than positions of other injection holes as seen from direction of advance of the nozzle;

angle subtended by center axis line I of the certain injection hole and center axis line H of the nozzle is made an acute angle; and

angles subtended by center axis line J of other injection holes and the center axis line H of the nozzle, respectively, are set at substantially 90 degrees.

5. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, a jetting medium is jetted obliquely rearward from a plurality of injection holes opened in the nozzle, a propulsion force is generated in the nozzle by that jetting force, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the jetting medium jetted from the nozzle, characterized in that:

the jetting medium is constituted by a mixture of a fluid and a gas; and

the nozzle is made to turn in a spiral manner in conjunction with turning and pulling out of the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe.

6 (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, jetting medium is jetted obliquely rearward from a plurality of injection holes opened in the nozzle, a propulsion force is generated in the nozzle by that jetting force, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the jetting medium jetted from the nozzle, characterized in that:

the jetting medium is constituted by a mixture of a fluid and a gas;

the nozzle is made to turn in a spiral manner in conjunction with turning and pulling out of the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is set so as to be larger than diameters of other injection holes; and

angle α subtended by center axis line I of the certain injection hole and center axis line H of the nozzle is set so as to be smaller than angle θ_3 subtended by center axis line J of other injection holes and the center axis line H of the nozzle (so that $\alpha < \theta_3$).

7. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, jetting medium is jetted from a plurality of injection holes opened in the nozzle, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the jetting medium jetted from the nozzle, characterized in that:

the jetting medium is constituted by a mixture of a fluid and a gas;

the nozzle is made to turn in a spiral manner along inner peripheral surface of the pipe, in conjunction with turning, pulling out, and pulling back the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is set so as to be larger than diameters of other injection holes; and

angle α subtended by center axis line I of the certain injection hole and center axis line H of the nozzle, and angle $1\sim$ subtended by center axis line J of other injection holes and the center axis line H of the nozzle, respectively, are set to 90 degrees.

8. (Original) A method of washing drain pipe in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, jetting medium is jetted from a plurality of injection holes opened in the nozzle, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the jetting medium jetted from the nozzle, in which a nozzle is provided at leading end of a high pressure hose, a universal guide is linked to leading end of the nozzle, jetting medium is jetted obliquely rearward from a plurality of injection holes opened in the nozzle, a propulsion force is generated in the nozzle by that jetting force, the high pressure hose is fed into a drain pipe while causing the high pressure hose to turn, and interior of the pipe is washed by the jetting medium jetted from the nozzle, characterized in that:

the jetting medium is constituted by a mixture of a fluid and a gas;

the nozzle is made to turn in a spiral manner in conjunction with turning and feeding out the high pressure hose, so that, of the plurality of injection holes, only a certain injection hole is always in opposition to the inner peripheral surface of the pipe;

diameter of the certain injection hole is made larger than diameters of other injection holes;

position of the certain injection hole is made farther rearward than positions of other injection holes as seen from direction of advance of the nozzle;

angle subtended by center axis line I of the certain injection hole and center axis line H of the nozzle is made an acute angle; and

angles subtended by center axis line J of other injection holes and the center axis line H of the nozzle, respectively, are set at substantially 90 degrees.

9. (Currently Amended) The method of washing drain pipe according to ~~any one of claims 1 to 4~~claim 1, characterized in that the high pressure water is hot water.

10. (Currently Amended) The method of washing drain pipe according to ~~any of claims 5 to 8~~claim 5, characterized in that the fluid is cold water or hot water, and the gas is air.

11. (Currently Amended) The method of washing drain pipe according to claim 1 ~~or 5~~, characterized in that diameter of the certain injection hole is set so as to be larger than diameters of other injection holes.

12. (Currently Amended) The method of washing drain pipe according to ~~any of claims 1 to 8~~claim 1, characterized in that the nozzle and the high pressure hose are directly linked by means of a pressure connection socket.

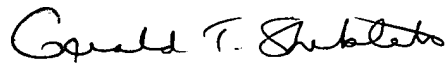
Atty. Docket No. 91752

13. (Currently Amended) The method of washing drain pipe according to ~~any of claims 1 to 8~~claim 1, characterized in that a reference line indicating position of the certain injection hole is formed on surface of the high pressure hose, along longitudinal direction thereof.

Claims 14-26 (Cancelled)

Respectfully submitted,

WELSH & KATZ, LTD.



Gerald T. Shekleton
Registration No. 27,466

Dated: March 24, 2004
Welsh & Katz, Ltd.
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
Telephone: (312) 655-1500